HOYA NEW

A photo taken in Samoa.

Oh There it is !

A pdf publication devoted to the Genus Hoya ISSN 2329-7336

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Editor:

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Contents

When a species is collected from the wild, I feel it is wise to identify it, propagate it and name it. In this way it will eventually get it into commercial channels, be distributed to all those interested in this genus and thus be preserved. If in the future the species is lost through natural causes or forest destruction it will still be here on earth in your collection.

Discussion: In New Hoya Vol. 3-1 two Hoya Section Eriostemma species were transferred to the genus Eriostemma, this is a name change, the diagnosis and descriptions do not change since they are the same plant only the name (Genus) has changed.

The following new species are presented in PDF format with ISSN number.

1. **Hoya uplandgrantensis** Kloppenburg
2. **Hoya carandangiana** Kloppenburg & Siar
3. **Hoya marananiae** Kloppenburg, Siar, Cajano & Carandang

Hoya uplandgrantensis Kloppenburg

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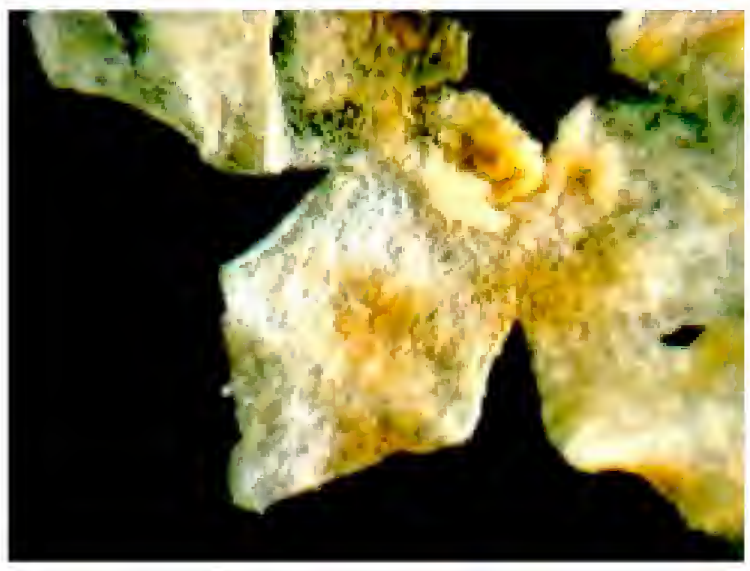
Hoya uplandgrantensis Kloppenburg sp. nova, holotypus 5965 (CAHUP) hic designatus. Not completely like any existing Philippine hoya species although similar in some respects to several named species as mentioned below. Worked up 7/7/06. This new hoya species is named for where it was collected "UP Landgrant" **Determination:** this is not *Hoya camphorifolia* Warburg as labeled. Coronal lobes are here long and outer apex acute. Also the coronal lobes here are horizontal not boat shaped. It appears close to *Hoya merrillii* Schlechter 1904 in corolla width and length and in the length of the corona lobes, however, the coronal lobes appear not to be raised outward and the leaves are not as wide; retinaculum ratio to pollinium length is way off 1: 2.5 here vs. 1:5.3. I thought it might be *H. macgregorii* Schlechter 1906 as the ends of the coronal lobes appear to be blunt but the flower is too large; the outer coronal lobes are not raised (they are horizontal).

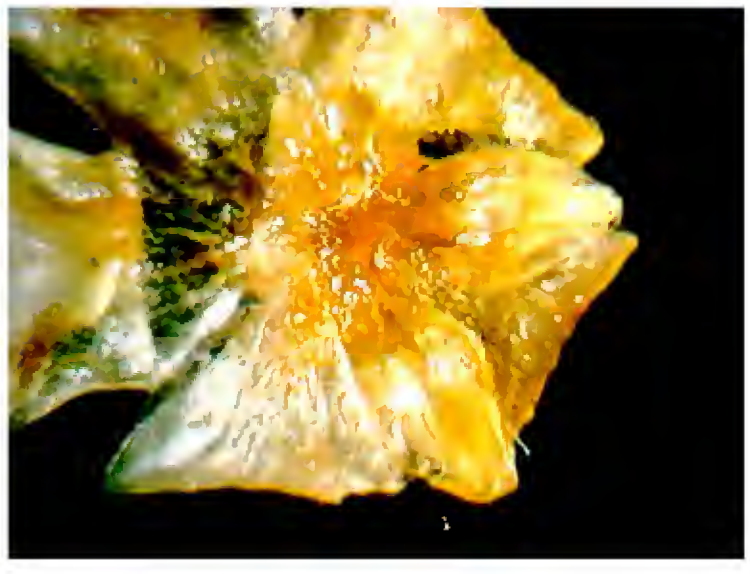
It appears not to be *Hoya bicolensis* Klopp. & Siar although it is close in some respects but way off in pollinarium and anther wing types.

Flower with no pedicel or calyx. Flower yellow.



Inside surface of the corolla enlarged about 8x. Outer surface glabrous, inside pubescent.

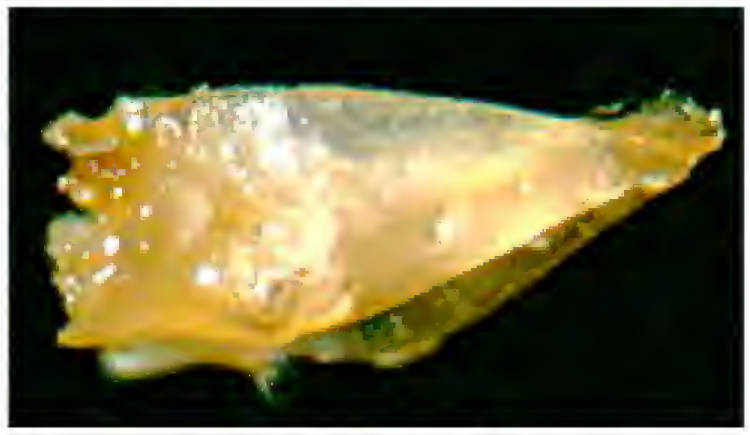
Sinus – sinus	0.24 cm
Sinus – center	0.22 cm
Sinus – apex	0.42 cm
Apex – center	0.55 cm
Widest	0.34 cm



Inside view of flower enlarged about 8x. Corona is horizontal. Inner lobe dentate outer lobe acute emarginate, glabrous.

Apex – apex	0.30 cm
Apex – center	0.35 cm
Widest	0.10 cm
Ret. – ret.	0.08 cm
Ret. – center	0.05 cm
Aw. - aw.	0.16 cm
Aw. – center	0.16 cm

Anther wings protrude, dorsal scale concave with central longitudinal ridge.



Side view of a coronal scale enlarged about 16x. Anther wings are deeply scythe shaped. inner lobe short and dentate, dorsal horizontal, sides well rounded, outer apes emarginate.

Bottom view of 2 coronal scales, channeled to thickened central column. Anther wings are thick and protrude from sinus.

Pollinarium enlarged about 165x.

Pollinium

length 0.46 mm
widest 0.18 mm

Retinaculum

length 0.14 mm
shoulder 0.10 mm
waist 0.05 mm
hip 0.08 mm
ext 0.06 mm

Translator

length 0.08 mm
depth 0.03 mm

Caudicle

bulb diam. 0.05mm

Ratio Ret.- Poll.: 1:2.5

Translator/caudicle type: d/o

Pollinia ends: R

Retinacula type: S

Hoya uplandgrantensis Kloppenburg CAHUP #5965
Labeled incorrectly as Hoya camphorifolia Warburg 1904

Measurements from Herbarium sheet:

Foliage blade: 7.00 – 9.27 cm long x 3.50 – 3.91 cm wide and elliptic base cuneate to somewhat obtuse, apex acute apiculate.

Petiole: 1.03 cm long

Peduncle: 2.23 cm - 2.47 cm long., nearly straight.

Internodes: 6.59 cm – 11.33 cm long with adventitious roots.

Hoya carandangiana Kloppenburg & Siar 2015

ISSN 1055-4564

Hoya carandangiana Kloppenburg & Siar sp. nova, Typus 71845 (CAHUP) hic designatus. Flores et pollinia parvulus, sed non viro in secto Acanthostemma nec section Otostemma. Corolla complanatus 0.84 cm diametro et pollinia 0.21 mm longis. Pedicellis globosus, glabrous, rectus 0.12 cm. longis; calycis segmentis ovatus obtusis glabris, subhyalina 0.12 cm longis, ligulatis. Coronae foliolis apice subrecurvo, ascendentibus, dorso concavo, 0.15 cm longus et 0.07 latis, subtus longitudinaliter.

This hoya species is small in diameter (flattened) and with a small pollinia usually associated with some Section Acanthostemma and Otostemma species but it is not in these sections. Collection number Quezon 3-105. This species is named to honor Jennelyn Carandang worker at the UPLB plant breeding program, Los Banos, Laguna, Philippines. This new species is unique in having such a unusual pollinarium and is unlike any other present Philippine hoya species.

Description details below:

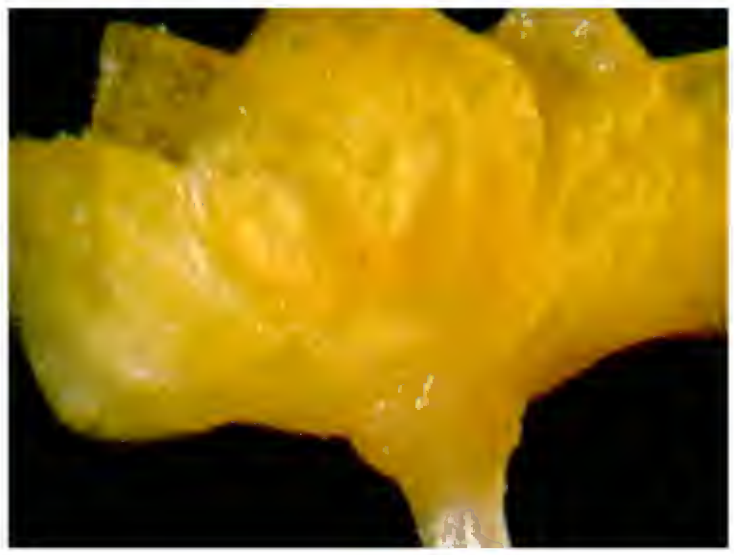
Pedicel and calyx enlarged ca. 18x.

Pedicel: strict, glabrous, terete, 1.20 cm long x 0.06 cm in diameter.

Calyx: is small but apex of sepals reach the corolla sinuses, avoid shape, ends obtuse, edges entire.

Calyx top view enlarged ca. 17x. Sepals are glabrous inside and out, outside granulate; ligules present, 0.12 cm long x 0.10 cm at the widest.

Ovaries: columnar, glabrous 0.09 cm tall; base pair 0.06 cm. wide.



Flower outside surface enlarged ca. 18x, corolla here is glabrous, deeply cut lobes, sepal apices just reach the corolla sinuses.

Sinus- sinus	0.20 cm
Sinus – center	0.15 cm
Sinus – apex	0.30 cm
Apex – center	0.42 cm
Widest	0.25 cm

Inside view of the flower enlarged ca. 12x. The corolla inside is puberulous. Coronal lobes just reach the corolla sinuses. Inner coronal lobes touch in center are a little elongate round, dorsal is slightly concave with a small umbo forward. Outer apex sub acute turned under slightly.

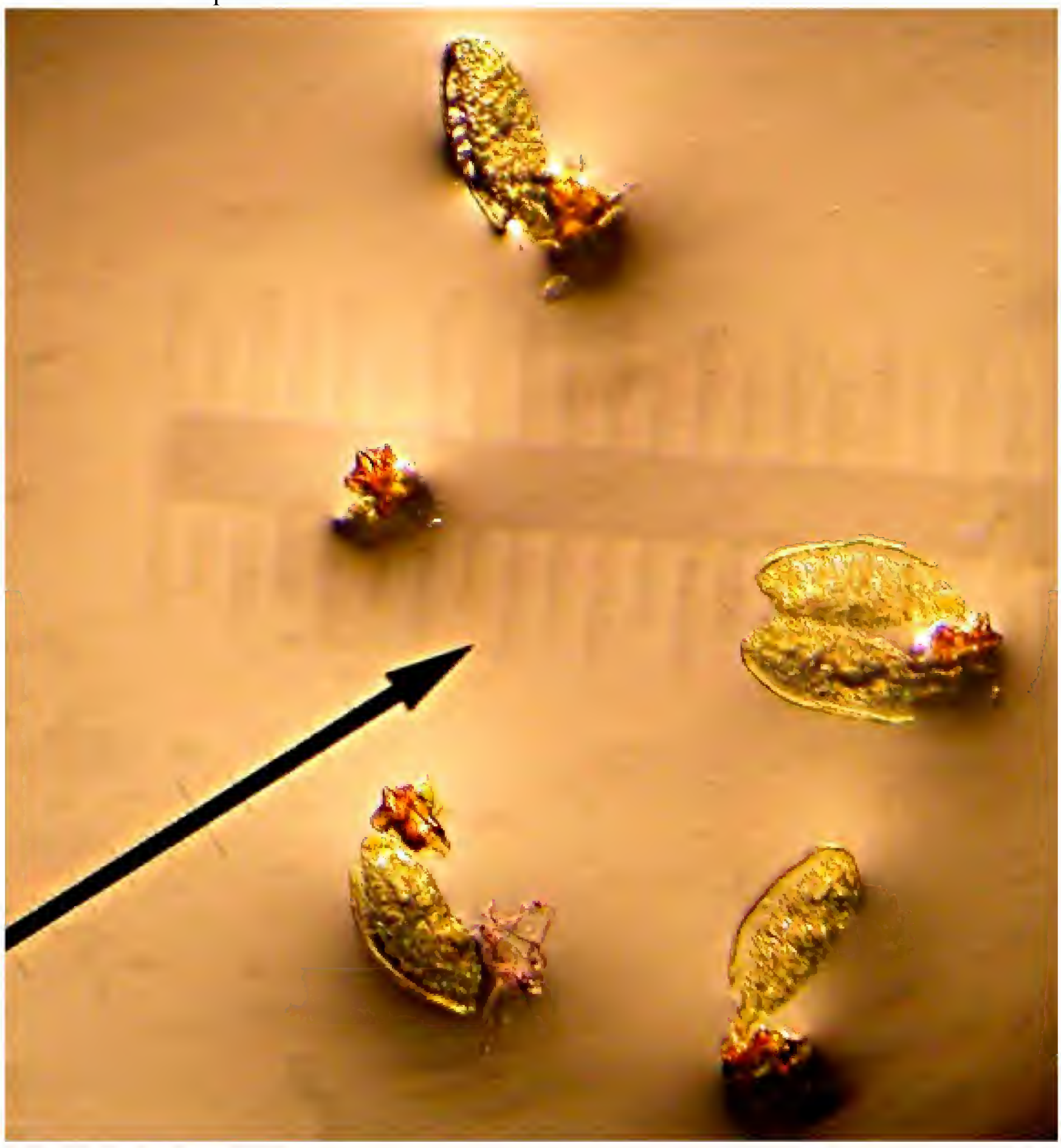
Corona: bottom (ventral) view enlarged ca. 50x. The lobes are channeled to near the elongated central column. Apex is turned down, anther wing apices are narrow, acute and project slightly.

Apex – apex	0.15 cm
Widest	0.07 cm
Ret. –ret	0.05 cm
Ret. – center	0.05 cm
Aw. – aw.	0.10 cm
Aw. – center	0.10 cm

Side view of a coronal lobe enlarged as above, outer lobe is raised with apex recurved, sides finely sulcate. Inner lobes meet in center or nearly so, dorsal concave with rounded edges and small umbo forward.

Leaves: see measurements and picture at end. Leaves are opposite, petiolate, elliptic, apex acuminate, base obtuse, plinerved with nerves visible above, surfaces glabrous, petiole round.

* One reviewer felt this belonged to H. camphorifolia but its flower does not fit any character of that species.



Pollinaria enlarged about 190x. These are extremely small Pollinia. They were difficult to extract, very loose in positions, the (clear) area in from pellucid edge is relatively wide, pellucid edge extends to the inner apex. **Translator/caudicle Type** p/o

Pollinium		**Retinaculum**	
length	0.21 mm	length	0.07 mm
widest	0.09 mm	shoulder	0.09 mm

		waist	0.06 mm
Translator		hip	0.07mm
length	0.05 mm	ext.	0.01 mm
depth	0.01 mm		

Caudicle

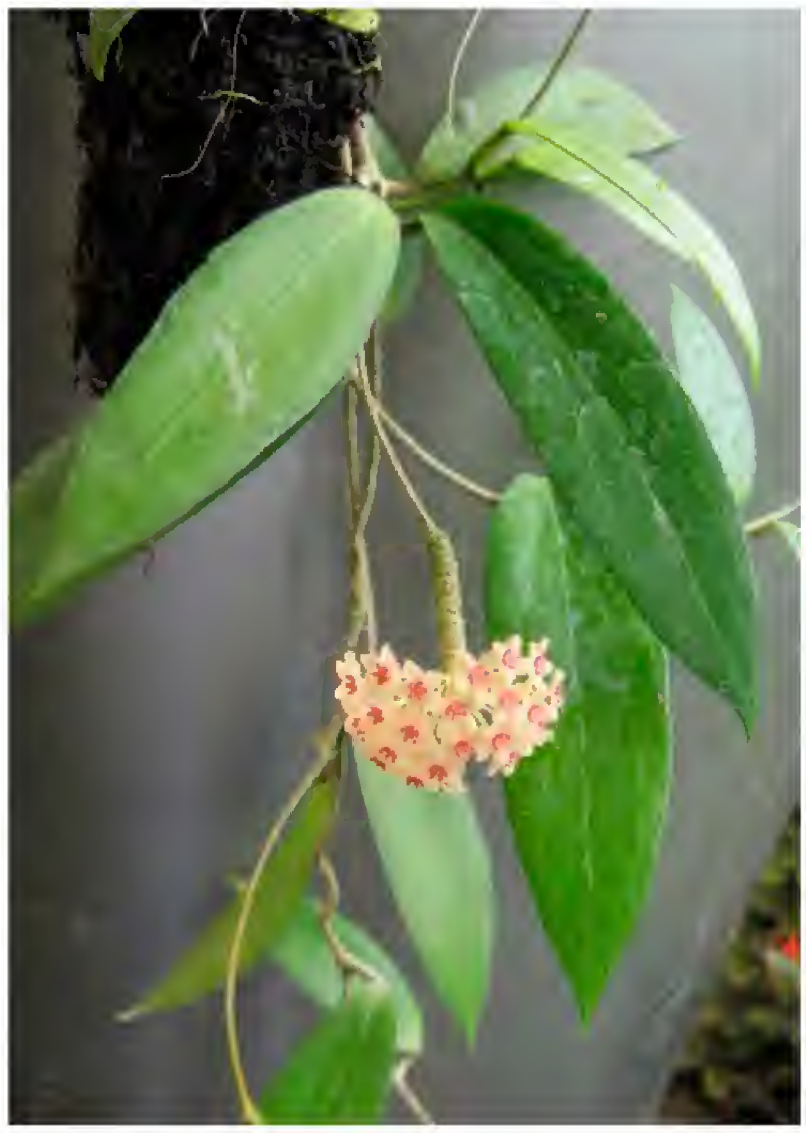
Ratio: pol./ wide 2.3 Pol./ret. 2.6 bulb diam. 0.03 mm

Pollinia inner apex type: RT (one rounded, one tapered).

Retinacular Type: S (shield).

Leaf measurement of Hoya Quezon 3-105

Leaf sample	Length (cm)	Width (cm)	Thickness (cm)
1	*11.7*	3.1	0.125
2	9.5	2.8	0.120
3	10.5	*3.3*	0.130
4	11.2	3.1	0.120
5	8.5	2.6	0.135
6	*8.0*	2.5	0.130
7	10.9	2.9	0.155
8	11.0	2.6	0.145
9	10.6	2.5	0.150
10	10.0	2.8	0.125
11	8.5	*2.1*	*0.190*
12	8.5	2.6	0.105
13	9.4	2.9	0.110
14	11.1	2.6	*0.085*
15	*11.7*	3.1	0.150
Mean	**10.1**	**2.8**	**0.132**
Range	***8.0 - 11.7***	***2.1 - 3.3***	***0.085 - 0.190***



About 24 flowers per globose cluster.

Hoya marananiae Kloppenburg, Siar, Cajano & Carandang

ISSN 1055-4564

Hoya marananiae Kloppenburg, Siar, Cajano & Carandang sp. nova, Holotype 71841 (CAHUP) hic designatus. Species, non acanthostemma, velde parvos cum triplinervus flora. Foliis petiolatis lat ellipticus, glabris, texture coriaceis, 5.00-9.30 cm longis, medio fere 2.60-3.50 cm latis, cymis umbelliformibus ca 20-floris; calycis segmentis triangularis ciliates; corolla rotate, extus glabra, intus breviter et dense puberulosa; coranae foliis apicem versus sub-adscendentibus dentatis, dorso concavis, apice externo obtuso; pollinara velde parvos.

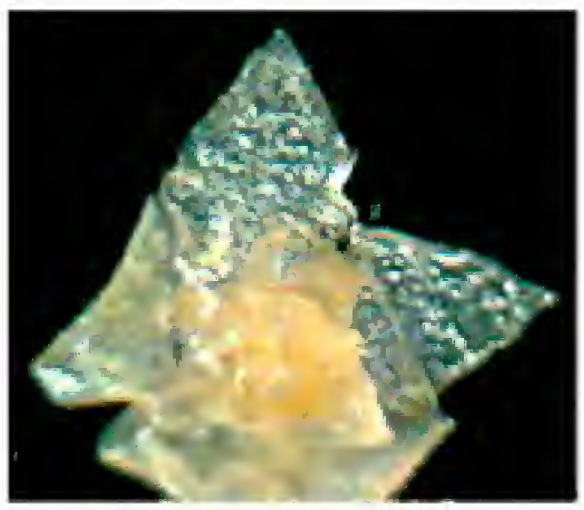
This new hoya species, not in the section Acanthostemma, has very small flowers along with leaves that are triplinerved. This is an unusual combination in the hoya species. See data and pictures below for details of this species. The species was collected by Faith Maranan on Polillo Island, Philippines * She is a student at University of the Philippines at Los Banos, Laguna (UPLB) studying under Dr. Simeona Siar. Presently she is studying the bar-coding of Hoya species.

Pedicel: section enlarged about 60x. It is strict, terete, glabrous 0.9 cm long x 0.05 cm in diameter, white in color, lenticulate surface.

Calyx: on pedicel enlarged about 20x. Sepals do not quite reach the corolla sinuses, are triangular ciliate, membranous apex sub-acute 0.12 cm long x 0.06 cm at the widest; with a small basal overlap, ligules not observed.

Ovaries: domed, glabrous, 0.07 cm tall and base pair 0.07 cm wide.

Flower: unopened, enlarged about 25x. When fully open the corolla is rotate, pale pink with yellow corona (see photo below). Surface is glabrous outside, puberulent inside.



Inside view of a flower enlarged about 15x. The corona is small, lobes do not reach the corolla sinuses.

Sinus – sinus	0.22 cm
Sinus – center	0.21 cm
Sinus – apex	0.25 cm
Apex – center	0.35 cm
Widest	0.25 cm

Corona: in flower enlarged as above. Inner lobes are raised, dentate, dorsal is concave, outer lobe obtuse. Enlarged ca. 22x.

Apex – apex	0.12 cm
Widest	0.05 cm
Ret. – ret.	0.05 cm
Ret. – center	0.04 cm
Aw. – aw.	0.09 cm
Aw.- center	0.07 cm

Labeled “U” 3(4) c/o Faith via Dr. Simeona Siar June 2010, 5 very small flowers in Zip bag.

Pictures of this species from Dr. Monina Siar, about 20 flowers in cluster. A small flower with strict pedicels, white, terete, glabrous. Corolla deeply cut, glabrous outside puberulent inside, cream to pale pink; rotate, corona small, inner lobes raised outer lobes obtuse, dorsal concave.

Leaves: opposite, petiolate, glabrous, ovate-elliptic, triplinerved, nervation lighter in color then the leaf surface, base obtuse, apex acute. (see chart below for measurements).

Two Pollinaria enlarged about 150x.

Pollinarium

length	0.25 mm
widest	0.13 mm

Retinaculum

length	0.05 mm
shoulder	0.06 mm
waist	0.04 mm
hip	0.05 mm
ext.	0.06 mm

Translator

length	0.06 mm
depth	0.01 mm

Caudicle

bulb. diam.	0.03 mm

Ratios: p/r 5.0 p/w 1.9

Translator/caudicle type: ls/o **Pollinia end type:** R **Retinaculum Type:** HU

Leaf sample	Length (cm)	Width (cm)	Thickness (cm)
1	7.30	2.90	0.260
2	5.50	2.90	0.150
3	6.00	2.90	0.180
4	6.70	2.60	0.240
5	9.10	3.50	0.160
6	5.00	2.60	0.275
7	9.30	3.10	0.175
8	6.60	2.90	0.175
9	6.20	2.80	0.205
10	8.00	2.80	0.205
Mean	**6.97**	**2.90**	**0.203**
Range	***5.00-9.10***	***2.60-3.50***	***0.150-0.275***

* Collected from Sition Bulalon, Barangay Poblacion, Burdeos, Polillo, Quezon Province. Philippines.

The municipality of Burdeos is geographically located on the North-eastern part of Polillo Island in the first congressional district of the province of Quezon, a town that is trapezoidal in shape, facing the vast Pacific Ocean. It is bounded on the north by the Pacific Ocean; on the North-west by Panukulan Quezon, on the South by Polillo, Quezon and on the West by Panukulan. The part of Sitio Bulalon where the hoya sample was collected is composed of a karst area with rice and coconut plantations.

Date collected: May 6, 2010
Coordinates: 22m above seal level. N14°49'33.8" E121°57'44.0"

Host plant: Syzigium subcaudatum (malaruhat) Other epiphytes found associates with the hoya: Piper, Ficus pseudopalma.

Collector:

Faith Maranan is now an Associate Professor from the Environmental Biology Division of the Institute of Biological Sciences, UPLB. She pursued MS Molecular Biology and Biotechnology with a minor in Botany from UPLB where she researched on molecular diversity and ecological aspects of some Philippine endemic Hoya species. The new species collected were among the species she studied.

Contributors:

Dale Kloppenburg retired: Lt. USNR, Plant Breeder, Research Agronomist, now taxonomy of Genus Hoya.

Dr. Simeona "Monina" V. Siar was head of the Plant Breeding Department at UPLB helped me (Dale Kloppenburg) greatly for years with hoya species, we will all miss her, She died 19 December 2011.

Ms. Jennelyn M. Carandang is a University Research Associate, Crop Science Cluster-Institute of Plant Breeding, University of the Philippines, Los Banos (UPLB), Laguna, Philippines.

Ms. Mary Ann Cajano is the Herbarium Associate at (UPLB) University of the Philippines, Los Banos, Laguna, Philippines.

Hoya marananiae
Holotype CAHUP 71841